



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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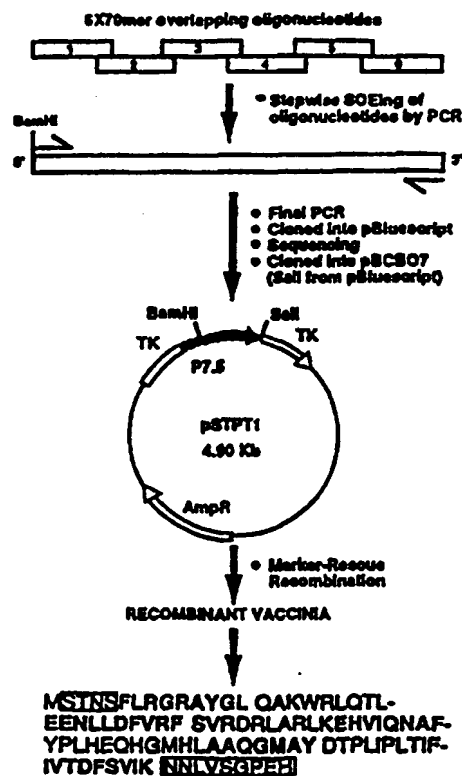
Published

With international search report.

(54) Title: POLYPEPTIDE VACCINES

(57) Abstract

The present invention relates to a recombinant polypeptide cytotoxic T lymphocyte vaccine. The vaccine comprises at least one recombinant protein including a plurality of cytotoxic T lymphocyte epitopes from one or more pathogens, wherein the at least one recombinant protein is substantially free of sequences naturally found to flank the cytotoxic T lymphocyte epitopes. In addition the present invention also provides a polynucleotide including at least one sequence encoding a plurality of cytotoxic T lymphocyte epitopes from one or more pathogens.



Polytope Protein Sequence

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/AU 95/00461

**A. CLASSIFICATION OF SUBJECT MATTER**Int Cl<sup>6</sup>: A61K 39/00 39/395 C12N 15/86 15/12 15/13 C07K 19/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

A61K 39/-- C12N 15/--

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
DERWENT: WPAT, CASM, KEYWORDS: CYTOTOXIC T CELL\*, CTL, POLYVALEN:, POLYEPITOP:, MULTIEPITOP, MULTIEPITOP:, MULTIPLE EPITOP:, VACC:, IMMUNOGEN:, ANTIGEN:

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Journal of Virology, Volume 67(1), 1993, pages 348-352, Whitton et al. "A string-of-beads vaccine, comprising linked minigenes, confers protection from lethal-dose virus challenge", see abstract, results.	1-13
X	WO 93/25575 (United States of America) 23 December 1993, see page 5 lines 3 to 17, examples, claim 2.	1-13
PX	WO 94/26785 (United States of America) 24 November 1994, see examples, claims.	1-13

☒ Further documents are listed in the continuation of Box C☒ See patent family annex

## \* Special categories of cited documents:

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13 OCTOBER 1995

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## C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 94/18234 (United Biomedical Inc.) 18 August 1994, see abstract, claims, figure 1.	1-3, 5-7 4, 8-13
Y	Journal of Immunology, Volume 149(1), 1992, pages 269-276, Rogers et al, "Augmentation of in vivo cytotoxic T lymphocyte activity and reduction of tumor growth by large multivalent immunogen", see abstract.	1-13
Y	WO 93/22343 (The Rockefeller University) 11 November 1993, see pages 1 to 5, claims, figures 7 and 8.	1-13
A	WO 90/11085 (Medical Biology Institute) 4 October 1990, whole document	1-13

**INTERNATIONAL SEARCH REPORT****Information on patent family members**

International Application No.

**PCT/AU 95/00461**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member	
WO	9325575	AU	45300/93	EP	644894
WO	9426785	AU	70173/94		
WO	9011085	EP	422164	US	5045320
WO	9418234	AU	61740		

END OF ANNEX